

Operation and Service

Manual

3rd Edition





MOUSE TRAPTM

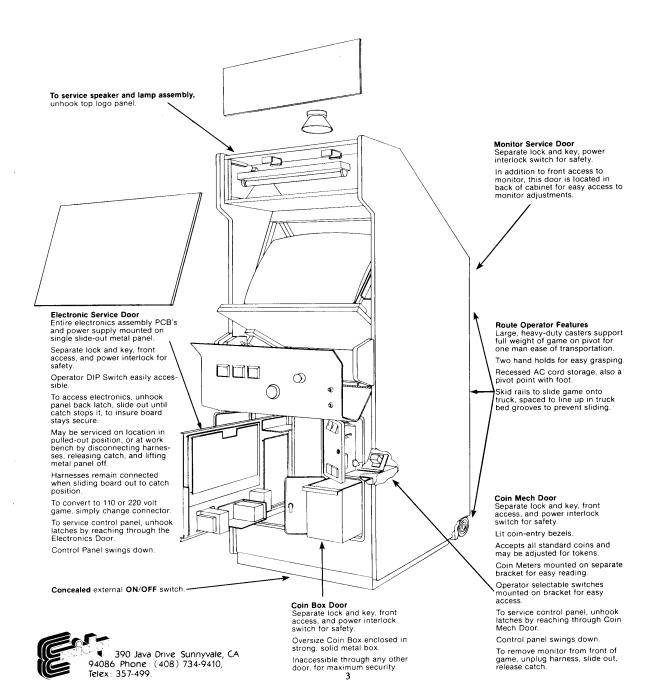
Operation and Service Manual $3^{\mbox{rd}}$ Edition

(c) 1981 Exidy, Inc.
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INTRODUCING THE EXIDY OPERATOR CONVENIENCE PACKAGE

Exidy's New Operator Convenience Package makes all components accessible through the front of the game. Each door has its own sepa-

rate lock and key, securing game service to capable hands, and profits to the right hands!



2.0 ADJUSTMENTS

2.1 POWER SUPPLY ADJUSTMENTS

All DC Power required to operate MOUSE TRAP TM is supplied by the Exidy Power Supply Module.

CAUTION: Only certified technicians should make adjustments on all components of MOUSE TRAPTM. AC line voltage selection is available in your MOUSE TRAPTM game by setting the appropriate jumpers on the power chassis. Only the +5v DC is adjustable. This must be adjusted to:

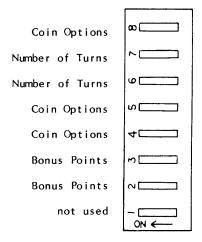
+5.00v DC +/- .25v

as measured on the Logic PCB near the microprocessor (location 2A).

2.2 SELECTABLE OPTIONS

MOUSE TRAPTM has several switch selectable options controlled by an 8-position DIP switch located on the main logic board at position 16A. This switch is accessible through the front electronics door. Simply slide the logic board out and locate the DIP switch on the lower left-hand corner.

The following drawing shows the particular functions controlled by the 8-position DIP switch.



Functions of the 8-position DIP Switch

2.3 SELECTABLE DIP SWITCH SETTINGS

A. COINAGE

MOUSE TRAP $^{\text{TM}}$ is shipped with the dip switch already set for optimum dollar return. Should you decide to change the settings, you may select any of the following options by setting the proper switch accordingly:

Switch

4

Switch

5

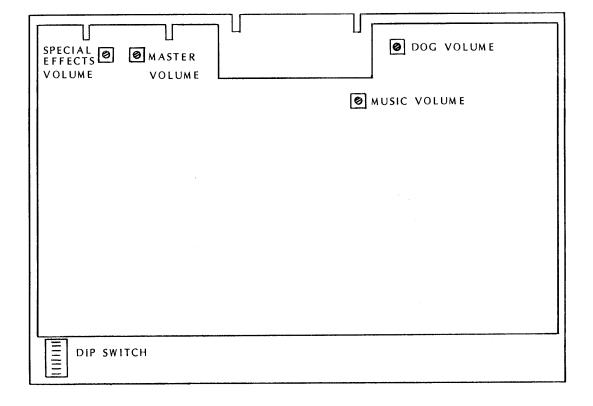
Switch

8

1 Coin - 1 Credit	OFF	OFF	OFF
2 Coins- 1 Credit	OFF	ON	OFF
1 Coin - 2 Credits	ON	OFF	OFF
1 Coin - 4 Credits	ON	ON	OFF
1 Coin - 3 Credits or 2 Coins- 7 Credits	OFF	ON	ON
1 Coin in Left Slot-1 Credit1 Coin in Right Slot-5 Credits	OFF	OFF	ON
One Coin in Left Slot- 1 Credit 1 Coin in Right Slot- 4 Credits	ON	OFF	ON
Two Coins in Left Slot- 1 Credit 1 Coin in Right Slot- 3 Credits	ON	ON	ON
5 Cledits			
B. NUMBER OF TURNS		Switch 6	Switch 7
B. NUMBER OF TURNS		6	7
B. NUMBER OF TURNS 2 turns		6 OFF	7 OFF
B. NUMBER OF TURNS 2 turns 3 turns		6 OFF ON	7 OFF OFF
B. NUMBER OF TURNS 2 turns 3 turns 4 turns		6 OFF ON OFF	7 OFF OFF ON
B. NUMBER OF TURNS 2 turns 3 turns 4 turns 5 turns E. BONUS TURN (Extra turn awarded when selectable number		6 OFF ON OFF ON Switch	7 OFF OFF ON ON Switch
B. NUMBER OF TURNS 2 turns 3 turns 4 turns 5 turns E. BONUS TURN (Extra turn awarded when selectable number of points are made). Extra turn for		6 OFF ON OFF ON Switch 2	7 OFF OFF ON ON Switch 3
B. NUMBER OF TURNS 2 turns 3 turns 4 turns 5 turns E. BONUS TURN (Extra turn awarded when selectable number of points are made). Extra turn for 30,000 points		6 OFF ON OFF ON Switch 2	7 OFF OFF ON ON Switch 3
B. NUMBER OF TURNS 2 turns 3 turns 4 turns 5 turns E. BONUS TURN (Extra turn awarded when selectable number of points are made). Extra turn for 30,000 points 40,000		6 OFF ON OFF ON Switch 2 OFF	7 OFF OFF ON ON Switch 3 OFF

2.4 AUDIO BOARD ADJUSTMENTS

The illustration that follows points out the four audio adjustments and the location of the DIP switch. The audio board rides piggyback on the logic board, mounted on the left wall of the game, when viewed from the front service door.



3.0 SELF DIAGNOSTIC TESTS

MOUSE TRAPTM has two diagnostic test modes. The first mode, the Logic/Audio Diagnostic Test Mode, checks the RAM and ROM chips on the Logic Board, and simultaneously checks the Audio Board. This test mode is the normal self-test mode and is automatically performed when MOUSE TRAPTM is first turned on. The second mode tests the Controls and Color only. To run this test, activate the coin switch while powering up. We will explain both of these modes in full detail.

You may bypass both diagnostic modes by depressing either player one or player two start button while powering up. After 8 seconds of the message "STAND BY VERSION X", (where X is a number) the Attract Mode appears.

3.1 LOGIC/AUDIO DIAGNOSTIC TEST MODE

The RAM Test

When MOUSE TRAPTM is first turned on, a processor and video RAM test is done. If the RAM passes, it goes immediately into the ROM test, without a message indicating it passed the RAM test.

If a RAM chip fails, an attempt is made to indicate the RAM chip where a failure was detected. Since the screen depends on a properly functioning RAM, this indication may not be displayed. A failed RAM may be indicated by a digit from 0 to 7 in every position on the screen using four colors. The code for these digits is as follows:

Number on Screen	RAM chip to check	
0 1	5 A 4 A	Processor RAM failure
2 3	8B 7B	Screen RAM failure
4 5 6 7	11C 13C 12C 14C	Video RAM failure

The RAM test cycles if the failure is persistent.

The ROM Test

If the RAM test passes, the ROM test begins. The message STAND BY VERSION X appears on the screen (where X is a number). One by one, exclamation points (!) appear on the screen. Each exclamation mark indicates half (2K) of a ROM board chip, numbered 6A through 13A, has passed the diagnostic test. After all marks appear, the game then goes into the Attract Mode, indicating all is well.

If any failure is detected during the ROM test, a hex digit appears instead of an exclamation point with a "BAD ROM" message at the top of the screen. The test repeats indefinately if a bad ROM is encountered. The key for which chip to check is as follows:

0 1	lower upper	 •	
2 3	lower upper	 	
4 5	lower upper	-	

lower 2K of 8A

upper 2K of 8A

Message: ROM Chip to check:

8 lower 2K of 7A 9 upper 2K of 7A

A lower 2K of 6A B upper 2K of 6A

The Audio Test

While the Logic tests are underway, the Audio board is also being checked.

Five seconds after power on, one or more quick beeps, like an organ chord, are heard. This is part of the Exidy Audio Diagnostic Test. The number of beeps that sound indicate different conditions of the Audio board.

The following code is an indication only, of where to first check the Audio Board. Because this diagnostic test only evaluates certain components, other circuitry is relied upon for the test. Should this other circuitry fail, the diagnostic test may not, then, point directly to the failure. Please use the results of this test as a guideline for further troubleshooting.

The code is as follows:

0 beep: If no beeps are heard, along with a hum or random notes, this may indicate a failure in 3A and/or 7A.

1 beep: All audio hardware is OK.
However, be sure to check the
Attract Mode Cycle anyway for a
possible message to check the
Audio Board. In occasional
instances, this can occur. The
message will further direct you.

2 beeps: ZERO PAGE RAM failure. Check 6532 RAM I.O. Timer Array at location 7B on the board.

3 beeps: (will not occur)

4 beeps: ROM failure

5 beeps: INTERRUPT failure. Check 6532 at location 7B.

In addition, this message appears during power up **only** if the Audio Board needs to be checked:

AUDIO SELF TEST ERROR

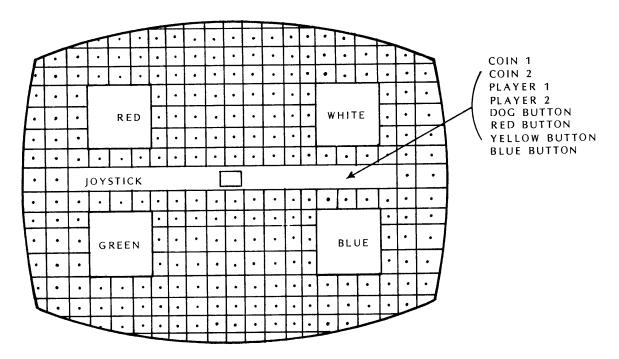
or

AUDIO COMMUNICATION ERROR

3-2 CONTROL AND COLOR TEST MODE

If desired, you may test all player controls and screen colors. To do so, activate either coin switch at power-up. The game then enters the Control/Color Test Mode. This mode lasts for seven minutes to give you time to test and make adjustments. After that, the Attract Mode begins.

In the Control/Color Test Mode, the screen shows this pattern:



The grid pattern tests your screen for any distortion or convergence.

The solid blocks of color (red, white, green, and blue) allow you to adjust the color. When any player control (player 1 start, player 2 start, or red, blue, yellow, or Dog button) or coin switch (coin 1 or coin 2) is activated, its name appears below the white box. This shows that the switch connection is proper. When the joystick is activated, the message Joystick appears below the red box. Also, in the middle of the screen, a square indicates the joystick direction.

4.0 NORMAL OPERATION

4.1 ATTRACT MODE

After the MOUSE TRAPTM is powered up and the self- diagnostic test is performed, the Attract Mode starts up, showing the following messages:

MOUSETRAPTM

CREDITS 00

ONE COIN FOR ONE CREDIT

ONE CREDIT FOR ONE PLAYER TWO CREDITS FOR TWO PLAYERS

EXIDY

(P) COPYRIGHT 1981 (C)

The number of coins or any currency per game is operator selectable and the message will reflect that choice.

MOUSETRAP HALL OF FAME

LWH 49720 INCREDIE	ᅡᇉ
DJS 47340 FABULOUS	5
VIC 44130 GREAT	
MRK 37830 SUPER	
HAI 25650 GOOD	

JOIN THE MOUSETRAP HALL OF FAME BY ENTERING YOUR INITIALS FOR A HIGH SCORE

At power up, this Hall of Fame contains ficticious high scores. The first player to exceed the lowest score may enter his score and initials. The Hall of Fame will show the high player's score until power is turned off, and then the ficticious scores reappear.

The following game instructions appear, in pictorial form:

MOUSE EATS CHEESE, BONES, TREASURES

DOG EATS CAT, CHEESE, BONES, TREASURES

CAT EATS MOUSE

HAWK EATS MOUSE AND DOG

IN MAKES HAWK STUPID

BONE TURNS MOUSE INTO DOG WHEN YOU USE THE DOG BUTTON

A few seconds of game play is then shown and the Attract Mode cycle begins again.

4.2 Game Play

Despite many cats on the prowl, the player steers a mouse through a playfield of halls where the mouse chomps cheese for points and finds other red prizes for bonus value.

The mouse searches out dog bones which are accumulated at the top of the screen. Each bone allows the mouse to become a ferocious dog when the "dog button" on the control panel is pressed. Now the player is the aggressor, and cats are open game for additional points of escalating value. After several seconds, the red dog begins blinking blue. This warns that his power is wearing off and he'll soon be a mere mouse again.

When all the cheese morsels on one level are eaten up, the player is given another game field with more challenge.

Randomly, a purple hawk flies over the walls in search of a delicious mouse or dog. The player's only defense is to enter the secret passage marked "in" at the center of the screen. This quickly transports the mouse or dog through an unseen tunnel to one of the four corners. This tactic makes the hawk "dumb", or aimless in his flight. The mouse or dog can then escape the hawk.

The player has the added strategy of doors to open and shut to his advantage. At the touch of a button, the player may open or close three colors of doors. By closing a door, the mouse can block a cat's advance. Or, when the mouse turns into a dog, the skilled player can use the doors to trap cats, earning additional points of escalating value for each one overtaken.

4.3 BONUS TURN FEATURE

An extra turn is given to a player everytime he scores 30,000, 40,000, 50,000, or 60,000 (operator selectable) points. A good player may rack up any number of bonus turns throughout a game, but the screen does not display more than five.

4.4 ENTERING THE MOUSE TRAP $^{\text{TM}}$ HALL OF FAME

Anytime a player's score exceeds one of the five current high scores, he is eligible to enter his initials in the Vanity Table. If both players of a two player game are record high scorers, the highest of the two is first invited to enter his initials. To do so, he directs the mouse around an alphabet chart with the joystick. Once on the letter desired, he hits the DOG button. The RUB feature allows a player to erase mistaken letters. Once the correct initials are keyed in, the player should go to END, and hit the DOG button. This will log in his initials, and return to the next mode.

The Hall of Fame Mode runs on a timer. If a player does not enter his or her initials, the Attract Mode eventually takes over.

LOGIC BOARD ASSEMBLY PARTS LIST

PART NUMBER	DESCRIPTION
177-3391-14	Logic PCB Assembly
77-3391-14	Logic PCB
58-0002-00	Spacer
100-0005-00	Ribbon Cable Assembly
22-0001-02	I.C. 74LS00
22-0002-02	I.C. 74LS02
22-0003-02	I.C. 74LS04
22-0004-00	1.C. 7407
22-0005-02	I.C. 74LS08
22-0006-02	I.C. 74LS11
22-0007-02	I.C. 74LS20
22-0008-02	I.C. 74LS21
22-0009-02 22-0010-02	I.C. 74LS27 I.C. 74LS32
22-0010-02	I.C. 74LS74
22-0011-02	I.C. 74LS112
22-0013-02	I.C. 74LS138
22-0214-02	I.C. 74LS139
22-0015-02	I.C. 74LS157
22-0016-02	I.C. 74LS161
22-0017-02	I.C. 74LS166
22-0018-02	I.C. 74LS193
22-0019-02	I.C. 74LS241
22-0020-02	I.C. 74LS245
22-0021-02	I.C. 74LS374
25-0001-00	I.C. MICROPROCESSOR 6502A
23-0001-00 23-0002-00	6301 PROM 6331 PROM
23-0003-00	6331 PROM
20-0001-00	IN4002 DIODE
02-4712-00	RESISTOR, 470 OHM 1/4W 5%
02-1222-00	RESISTOR, 1.2K 1/4W 5%
02-2222-00	RESISTOR, 2.2K 1/4W 5%
02-3322-00	RESISTOR, 3.3K 1/4W 5%
09-2212-00	RESISTOR, 220 OHM 1/8W 5% 10 PIN SIP
09-2222-00	REISTOR, 2.2K 1/8W 5% 10 PIN SIP
09-4722-00	RESISTOR, 4.7K 1/8W 5% 10 PIN SIP
09-6822-00	RESISTOR, 6.8K 1/8W 5% 10 PIN SIP
10-1034-1 10-1044-1	CAPACITOR, .01 UF CERAMIC DISC CAPACITOR, .1 UF CERAMIC DISC
11-6853-0	CAPACITOR, 6.8 UF 25V DIPTANT
13-4775-0	CAPACITOR, 470UF 10V ELECTROLYTIC
47-0001-00	DIPSHUNT JUMPER PAKS 16 PIN
49-5002-00	DIP SWITCH 8 POSITION
29-0001-00	CRYSTAL 11.289MHZ (SERIES)
44-1601-00	DIP SOCKETS 16 PIN LOW PROFILE
44-2401-00	DIP SOCKETS 24 PIN LOW PROFILE
44-4001-00	DIPSOCKETS 40 PIN LOW PROFILE
44-1401-00	DIP SOCKETS 14 PIN LOW PROFILE
44-1801-00	DIP SOCKETS 18 PIN LOW PROFILE
11-1053-00 02-2212-00	CAPACITOR 1UF 25V DIPTANT RESISTOR, 220 OHM 1/4W 5%
02-2212-00	KESISTOR, 220 OTHE 1/4W 3/6

LOGIC BOARD ASSEMBLY PARTS LIST (continued)

PART NUMBER DESCRIPTION	
02-1802-00 RESISTOR, 18 OHM 1/4W 5%	
10-3314-4 CAPACITOR, 330PF CERAMIC DIS	SC.
02-4732-00 RESISTOR, 47K	
11-1063-00 10UF 16V DIPTANT	
23-0004-00 2732, EPROM	
23-0005-00 2716, EPROM	
23-0006-00 2114 STATIC RAM	
23-0005-00 2716, EPROM 23-0006-00 2114 STATIC RAM 02-1822-00 RESISTOR, 1.8K 1/4W 5% 02-2272-00 RESISTOR, 2.7K 1/4W 5%	
02-2272-00 RESISTOR, 2.7K 1/4W 5%	
02-1052-00 RESISTOR, 1M 1/4W 5%	
27-0003-00 I.C., OSC NE555	
20-0006-00 DIODE, 4454	
23-0014-00 2732, EPROM	
23-0015-00 2732, EPROM	
23-0016-00 2732, EPROM	
23-0017-00 2732, EPROM	
23-0018-00 2732, EPROM	

AUDIO/COLOR BOARD ASSEMBLY

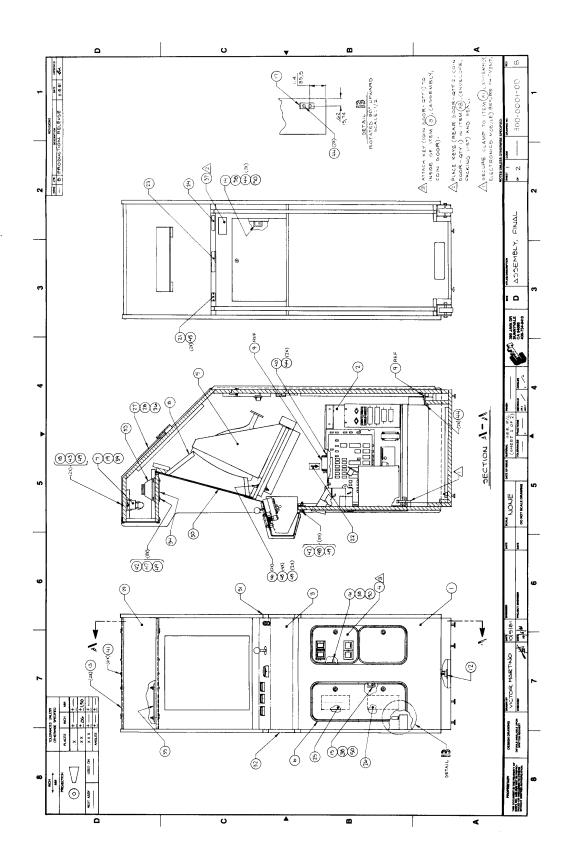
PART NUMBER	DESCRIPTION
177-3392-14	
77-3392-14	
22-0013-00	I.C. 74LS138
26-0001-00 22-0023-00	I.C. 6520-A
22-0023-00	I.C. 4069
22-0003-02	1.C. 74LS04
22-0001-02	
22-0021-02	
22-0024-00	I.C. 4053
22-0025-00	I.C. 4175
22-0011-02	I.C. 74LS74
22-0026-00	I.C. LM324
22-0027-02	
22-0028-00	I.C. 4051
22-0014-02	I.C. 74LS139
22-0028-00 22-0014-02 22-0029-02	1.C. 74LS148
22-0030-02	I.C. 74LS151
22-0031-02	I.C. 74LS174
10-1044-1	CAPACITOR, .1 UF CERAMIC
10-2204-1	CAPACITOR, 22PF 16V CERAMIC
10-1034-1	CAPACITOR, .01UF 16V CERAMIC
13-3365-1	CAPACITOR, 33UF 25V ELECTROLYTIC
13-1075-00	CAPACITOR, 100UF 16V ELECTROLYTIC
22-0030-02 22-0031-02 10-1044-1 10-2204-1 10-1034-1 13-3365-1 13-1075-00 13-4755-00 02-3332-00 02-3322-00 02-1062-00 02-3012-00	CAPACITOR, 4.7UF 16V ELECTROLYTIC
02-3332-00	RESISTOR, 33K 1/4W 5%
02-3322-00	RESISTOR, 3.3K 1/4W 5%
02-1062-00	RESISTOR, 10M 1/4W 5%
02-3012-00	RESISTOR, 300 OHM 1/4W 5%
02-1802-00	RESISTOR, 18 1/4W 5%
02-2232-00	RESISTOR, 22K 1/4W 5%
02-3012-00 02-1802-00 02-2232-00 02-2722-00	RESISTOR, 2.7K 1/4W 5%

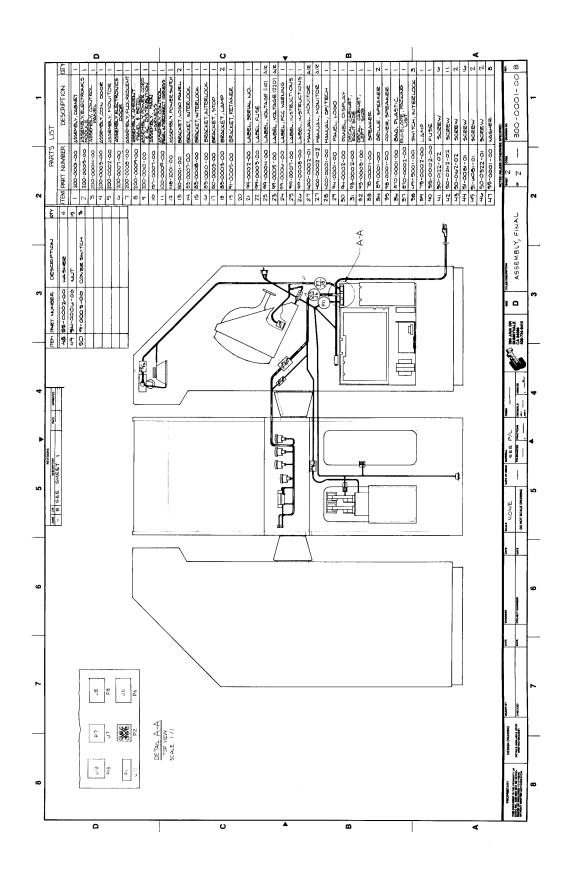
AUDIO/COLOR BOARD ASSEMBLY (continued)

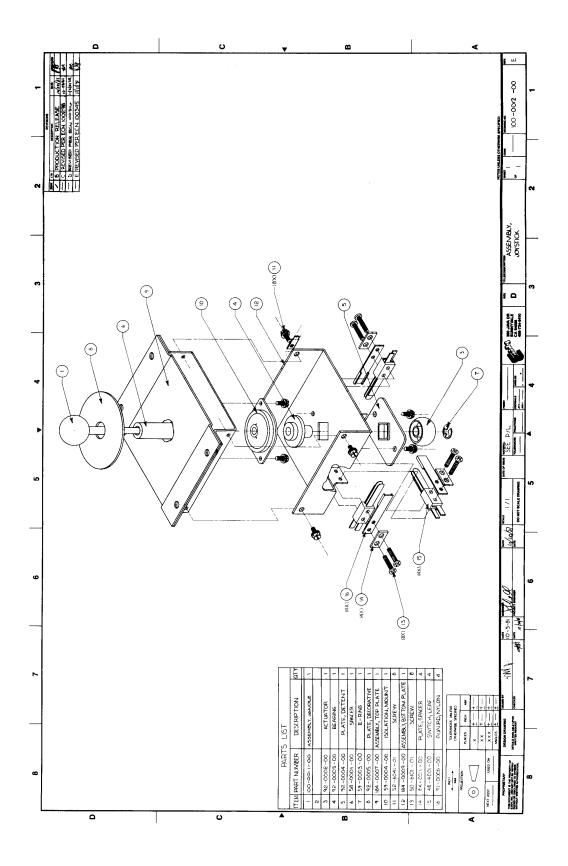
PART NUMBER	DESCRIPTION
02-1322-00	RESISTOR, 1.3K 1/4W 5%
02-6812-00	RESISTOR, 680 OHM 1/4W 5%
02-3312-00	RESISTOR, 330 OHM 1/4W 5%
02-1612-00	RESISTOR, 160 OHM 1/4W 5%
02-8202-00	RESISTOR, 82 OHM 1/4W 5%
02-3902-00	RESISTOR, 39 OHM 1/4W 5%
02-1032-00	RESISTOR, 10K 1/4W 5%
07-1034-00	10K POT
29-0002-00	3.579545 MHZ CRYSTAL
47-0001-00	16 PIN DIP SHUNT
44-1401-00	14 PIN DIP SOCKET
44-2401-00	24 PIN DIP SOCKET
44-2801-00	28 PIN DIP SOCKET
44-4001-00	40 PIN DIP SOCKET
44-1601-00	16 PIN DIP SOCKET
02-4712-00	RESISTOR, 470 OHM 1/4
02-2422-00	RESISTOR, 2.4K 1/4W
02-2032-00 02-1832-00	RESISTOR, 20K 1/4W RESISTOR, 18K 1/4W
02-1032-00	RESISTOR, 3.9K 1/4W
02-2452-00	RESISTOR, 2.4M 1/4/W
22-0039-00	1.C. 74LS42
23-0007-00	2732 EPROM
23-0008-00	2732 EPROM
23-0009-00	2732 EPROM
10-2034-01	CAPACITOR .02 uf CER.
23-0010-00	2732 EPROM
27-0003-00 22-0033-00	NE555 OSC.
22-0033-00	TLO81 OP/AMP
27-0004-00	MC3417L DELTA MOD
22-0034-00	4006 CMOS SHIFT REG.
40-0003-00	6 PIN MALE CONNECTOR .156 CENTER
22-0037-00	I.C. 74LS125
22-0015-00 22-0010-00	I.C. 74LS157 I.C. 74LS32
22-0038-00	I.C. 74LS367
25-0003-00	Z80 CPU
22-0035-00	4070 CMOS EXC. OR GATE
22-0036-00	LM741EN OP/AMP
02-5643-01	RESISTOR, .560K OHM 1/4W
84-0014-00	HEATSINK, THM6045
14-2044-00	CAPACITOR, MYLAR .2UF 16V
10-1024-00	CAPACITOR, CERAMIC .001UF 16V
09-0001-00	RESISTOR, 1.8K SIP PAC 8 PIN
09-0002-00	RESISTOR, 4.7K SIP PAC 8 PIN
21-0001-00	NPN TRANSISTOR TIP 120
21-0002-00	PNP TRANSISTOR, TIP 125
10-5024-01	CAPACITOR, MYLAR .0022 UF
14-2224-00	CAPACITOR, MYLAR .0022 uf
23-0011-00	2716, EPROM
23-0012-00	2716, EPROM
23-0013-00	2716, EPROM

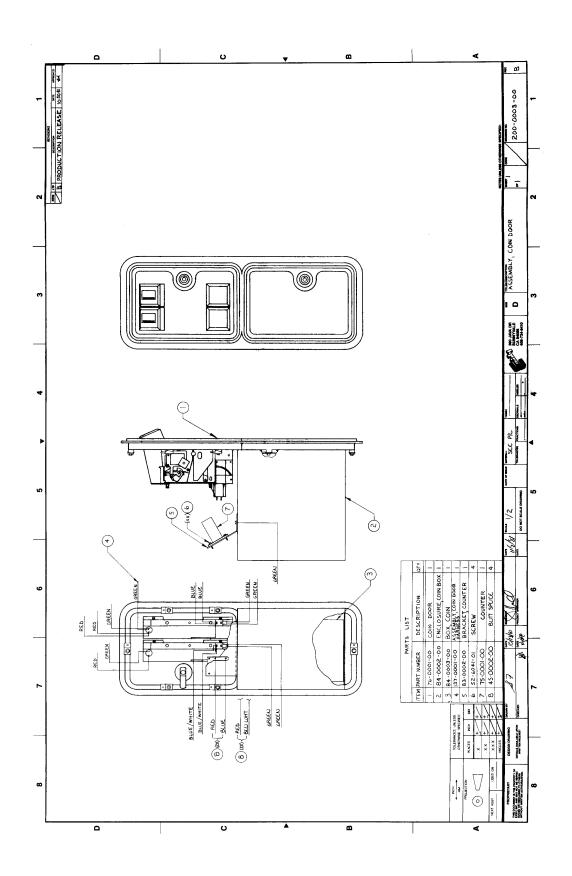
AUDIO/COLOR BOARD ASSEMBLY (continued)

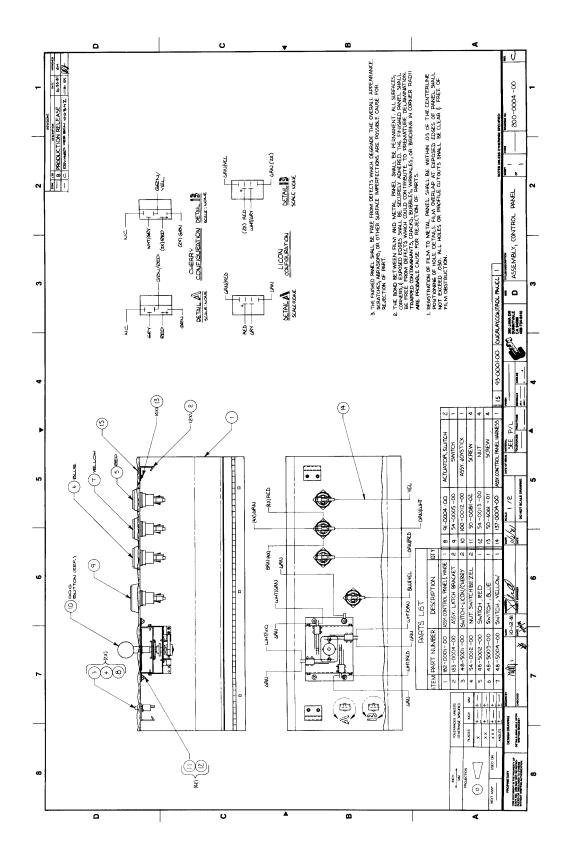
PART NUMBER	DESCRIPTION
13-3355-01	CAPACITOR .33 uf 16V ELECTROLYTIC
40-0004-00	CONNECTOR, PCB MALE
25-0002-00	I.C. 6532
25-0004-00	1.C. 6502
27-0001-00	I.C. 6840
22-0022-02	I.C. 74LS154
27-0002-00	I.C. 8253

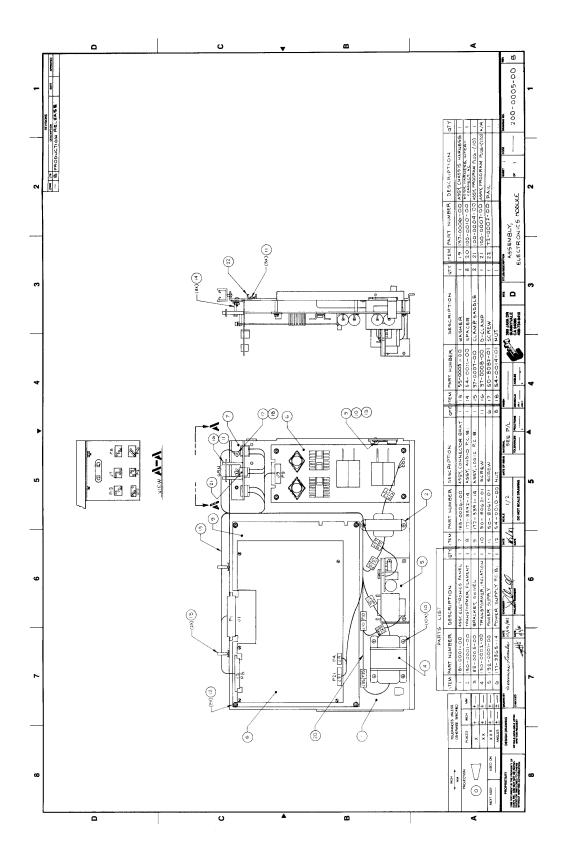


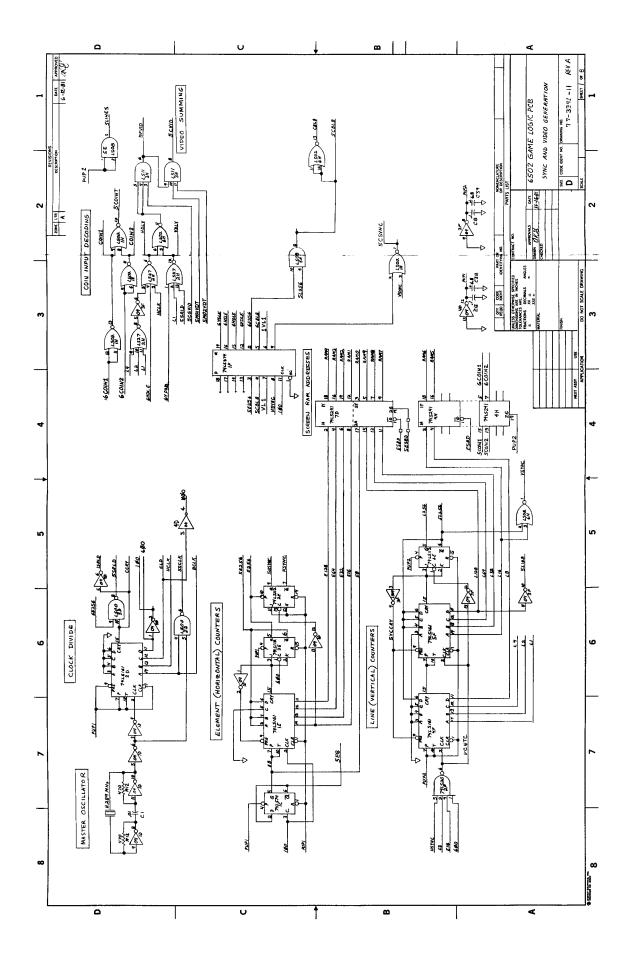


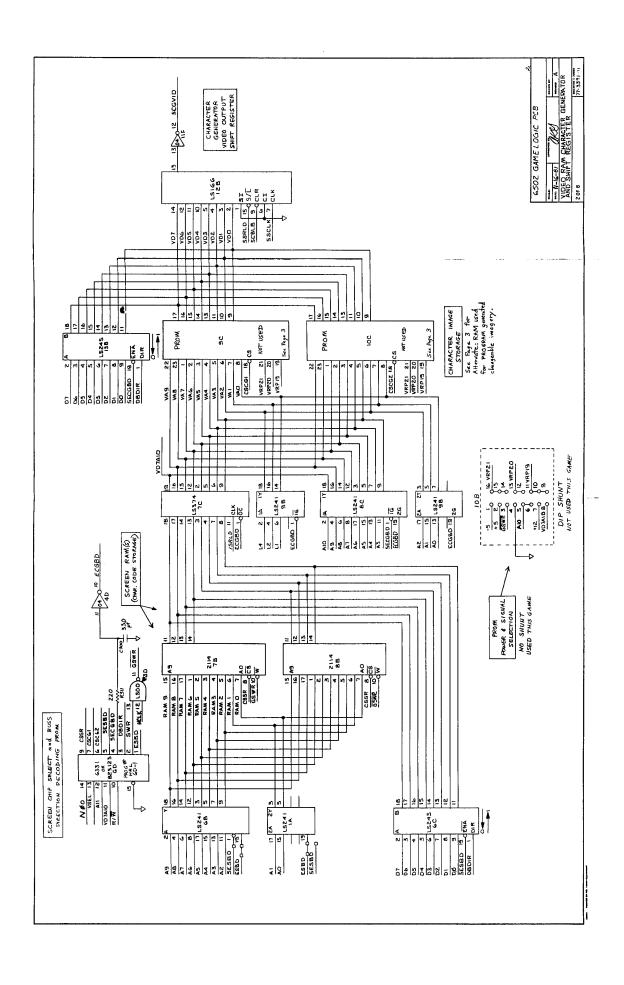












6502 GAME LOGIC PCB VD6 VD5 VD5 = 51 10 4 RAM 2114 1834×4 RAM 2114 72C WAS 16 WAS 16 WAS 16 WAS 16 WAS 17 18 WAS 17 18 WAS 17 18 WAS 17 CHARACTER GENERATOR
INASE STORAGE RAMS
FOR USE WITH PROSERM
generated characteric imagery.
ALL 21145 & 300 ns VD6 VD6 VD5 RAM 2114 1024×4 RAM 2114

